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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/500,589

06/30/2004

Stefan Clauss

2893

4763

7590

11/18/2005

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EXAMINER

TERESINSKI, JOHN

ART UNIT

PAPER NUMBER

2858

DATE MAILED: 11/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/500,589

Applicant(s)

CLAUSS ET AL.

Examiner

John Teresinski

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2004.  
2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-5, 7-15 and 17-19 is/are rejected.  
7) ☒ Claim(s) 6 and 16 is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 16 September 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Drawings***

The drawings are objected to because the non-descriptive box element in Fig. 5 (box adjacent to element 82) is not labeled and not numbered with a reference numeral. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1,2, 4, 5, 7-15 and 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,211,662 to Bijawat et al..

Regarding claim 1, Bijawat et al. disclose a hand held hidden object sensing method and apparatus according to which a detection signal is generated by at least one capacitive sensor device (column 3 lines 59-61), the detection signal penetrating the medium that is to be analyzed in such a way that information is obtained about the objects that are enclosed in the medium by evaluating the detection signal, particularly by measuring impedance (column 7 lines 20-30), wherein, to evaluate the detection signal, an algorithm is used that separates the measured signal into signal parts originating from the enclosing medium and signal parts originating from the object enclosed in the medium (column 3 lines 43-61, column 4 lines 43-67 and Fig. 2).

Regarding claims 2 and 7-9, Bijawat et al. disclose a depth parameter for the material of the enclosing medium (column 3 lines 43-61).

Regarding claim 10, Bijawat et al. disclose depth information of the medium is obtained by measuring dielectric constants/changes in capacitance (column 4 lines 43-52).

Regarding claim 11, Bijawat et al. disclose the signal being measured and evaluated as a function of a lateral displacement of the sensor device that is generating the detection signal (column 4 lines 53-55).

Regarding claim 12, Bijawat et al. disclose the signal being measured and evaluated as a function of more than one measuring frequency (column 3 lines 62-67).

Regarding claim 13, Bijawat et al. disclose a hand-held locating device (10) for locating objects enclosed in a medium, having a sensor device, with means for generating a detection

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signal for the sensor device (column 7 lines 20-30), a control and evaluation unit for determining measured values from the detection signal (column 4 lines 3-15), and an output device for the determined measuring devices (column 4 lines 3-15).

Regarding claim 14, Bijawat et al. disclose the measuring device includes at least one internal calibration device for a measured signal (column 4 lines 3-15).

Regarding claims 4, 5 and 15, Bijawat et al. disclose measurement of at least one defined impedance (column 4 lines 43-45).

Regarding claim 17, Bijawat et al. disclose switching means for temporary activation of the calibration device (column 4 lines 28-32).

Regarding claim 18, Bijawat et al. disclose means for saving material data, in particular dielectric constants, of known materials (column 4 lines 3-15).

Regarding claim 19, Bijawat et al. disclose means that permit calculated measured results, in particular the position and/or depth of an object enclosed in a medium, to be depicted in a spatially-resolved manner on a display device of the measuring device (Fig. 1 elements 28 and 30).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bijawat et al. in view of U.S. Patent Publication No. 2001/0024126 to Sporl et al..

Regarding claim 3, Bijawat et al. does not disclose a program map capable of being queried by an evaluation algorithm. Sporl et al. disclose a capacitive stud sensor including a a program map capable of being queried by an evaluation algorithm (paragraph 16). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a shift in current as taught by Sporl et al. into Bijawat et al. for the purpose of providing increased accuracy

#### *Allowable Subject Matter*

Claims 6 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance:

Regarding claims 6 and 16:

The primary reason for the allowance of claims 6 and 16 is the inclusion of obtaining at least one reference signal via a short-circuiting of the detection signal, in particular in the capacitive sensor device. It is these features found in the claim, as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### *Response to Arguments*

Applicant's arguments filed September 16, 2005 have been fully considered but they are not persuasive.

In response to applicants arguments that Bijawat et al. does not disclose an algorithm that separates the measured signal into signal parts originating from the enclosing medium and signal parts originating from the object enclosed in the medium, the examiner disagrees. Applicant is referred to Bijawat et al. (column 3 lines 43-61, column 4 lines 43-67 and Fig. 2), which discloses an algorithm/step by step procedure for detecting a hidden object that separates the measured signal into signal parts originating from the enclosing medium and signal parts originating from the object enclosed in the medium. Sensor (10) is calibrated establishing a reference frame for the sensor (column 4 lines 29-51), during use of the sensor the unit is slid across an enclosing medium wherein the unit will illuminate LEDS when a hidden object is sensed. The sensor when slid across the enclosing medium will have a certain output, the sensor output will change when a hidden object detection triggering the indicating means. Therefore a process of steps are carried out to sense a hidden object and separation of the measured signal into a portion originating from the object enclosed in the medium is carried out by Bijawat et al. meeting the claimed limitations.

In response to applicants arguments that Bijawat et al. does not disclose an impedance measurement, or measuring the phase of the resistance the examiner disagrees. Applicant is

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referred to Bijawat et al. (column 3 lines 59-61, column 7 lines 21-25), which teaches using an impedance/capacitive sensor, further measuring the phase of the resistance is not claimed.

### *Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Teresinski whose telephone number is (571) 272-2235. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diane Lee can be reached on (571) 272-2399. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JT

JT

November 14, 2005

V. Nguyen  
11/17/2005

VINCENT Q. NGUYEN  
PRIMARY EXAMINER